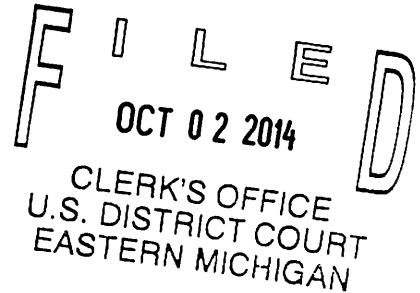


UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION



MSC.SOFTWARE CORPORATION,

Plaintiff,

Case No. 2:07-cv-12807

v.

ALTAIR ENGINEERING, INC.,
MARC KLINGER, RAJIV RAMPALLI,
and MICHAEL HOFFMANN,

HON. AVERN COHN

Defendants.

**MEMORANDUM AND ORDER DENYING DEFENDANTS RAJIV RAMPALLI AND
ALTAIR ENGINEERING'S MOTION FOR JUDGMENT AS A MATTER OF LAW OR
FOR NEW TRIAL ON COUNTS I AND III (Doc. 825)**

I. Introduction

This is a business dispute tried to a jury. Relevant to the captioned motion, a jury found in favor of plaintiff MSC.Software Corporation (MSC) on its claims under Count I claiming breach of confidentiality agreement against Rajiv Rampalli (Rampalli) and under Count III claiming misappropriation of trade secrets against Rampalli and Altair Engineering (Altair). The trade secrets are features of a multi-body dynamics solver marketed by MSC under the name ADAMS/Solver. Altair is in competition with MSC and markets a solver under the name MotionSolve.

The case went to trial on five alleged trade secrets that MSC said Rampalli

*This is a redacted version of the Court's decision. The redactions have been made at plaintiff's request. Defendants have no objections to them. An unredacted version of the Court's decision is filed under seal. See Doc. 920.

disclosed to Altair in violation of a confidentiality agreement and Altair in turn misappropriated these trade secrets by including them in Altair's MotionSolve product. The jury found that three of five alleged trade secrets were in fact trade secrets and had been misappropriated. The jury awarded damages for Rampalli's breach of confidentiality and Rampalli and Altair's misappropriation in the amount of \$26,100,000.00, with each defendants' percentage responsibility as follows:¹

Altair	99.400%
Rampalli	.535%

Before the Court is Rampalli and Altair's motion for judgment as a matter of law or for a new trial on Counts I and III as to liability.² For the reasons that follow, the motion is DENIED.

II. Overview

Altair³ raise five arguments in support of their motion. First, Altair argues that two of the three trade secrets, Jacobian Refactorization and Discontinuity Checking,⁴ were publicly known, readily ascertainable, and/or not kept secret. This argument does

¹Michael Hoffman was assessed .065% as a result of the jury finding he breached his confidentiality agreement. Hoffman has not challenged this finding.

²Also before the Court is Altair, Rampalli, and Kilnger's renewed motion for judgment as a matter of law on non-solicitation claims (Doc. 827) and Altair and Rampalli's motion for judgment as a matter of law and new trial or remittitur on damages related to the trade secret claims (Doc. 829). These motions are the subject of separate memoranda and orders.

³For ease of reference, defendants will be collectively referred to as "Altair" except where appropriate to refer to Rampalli individually.

⁴Altair does not challenge the evidence or jury verdict as to the trade secret described as setting [REDACTED]

not carry the day because essentially defendants would have the Court reweigh the evidence and draw all reasonable inferences in their favor. This is not permissible on a motion for judgment as a matter of law or for a new trial. As will be explained, MSC presented ample evidence from which a reasonable jury concluded that Discontinuity Checking, and Jacobian Refactorization were not publicly known, were readily ascertainable, and were kept secret. Second, Altair argues that none of the trade secrets have economic value. This argument fails because MSC presented testimony, documents, correspondence, and presentations by Altair personnel from which a reasonable jury could conclude that these trade secrets had value to Altair. Third, Altair argues that MSC did not show that Rampalli or Altair knowingly misappropriated trade secrets. Again, MSC presented evidence from which a reasonable jury could find that Rampalli and Altair knew, or had reason to know, that Rampalli implemented MSC trade secrets in MotionSolve with Altair's express approval. Fourth, Altair argues that there was no factual basis for the jury to find that Rampalli and Altair "willfully and maliciously" misappropriated MSC's trade secrets. This argument fails because the jury's decision was reasonably based on the evidence at trial. Finally, Altair argues that Rampalli is entitled to judgment as a matter of law or a new trial on Count I to the same extent he is entitled to that relief on Count III. However, because Rampalli is not entitled to judgment as a matter of law or a new trial on Count III, his argument as to Count I likewise fails.

III. The Trial

The trial spanned twenty-six days. MSC called 18 witnesses in its case in chief. Altair called ten witnesses in defense. MSC called three witnesses in rebuttal.

Approximately 200 exhibits, many consisting of multiple pages, were admitted. The jury deliberated for three days before rendering its verdict. Suffice it to say that the jury was presented with a mountain of documentary evidence and listened to hours of testimony, both live and by deposition.

IV. Legal Standards

Altair moves for judgment as a matter of law under Fed. R. Civ. P. 50(b)(3) and for a new trial under Fed. R. Civ. P. 59. In diversity cases, such as this, Rule 50 motions are subject to “the standard of review used by the courts of the state whose substantive law governs the action.” Betts v. Costco Wholesale Corp., 558 F.3d 461, 466 (6th Cir. 2009) (quoting Kusens v. Pascal Co., 448 F.3d 349, 360 (6th Cir. 2006)).

There is no dispute that California and Michigan law apply. California and Michigan courts use the term “judgment notwithstanding the verdict” (JNOV) instead of “judgment as a matter of law.” Taylor v. Nabors Drilling USA, LP, 166 Cal. Rptr. 3d 676, 684 (Cal. Ct. App. 2014); Brocklehurst v. PPG Indus., Inc., 123 F.3d 890, 894 n.3 (6th Cir. 1997). Courts deciding JNOV motions in California “must accept as true the evidence supporting the jury’s verdict, disregarding all conflicting evidence and indulging in every legitimate inference that may be drawn in support of the judgment.” Taylor, 166 Cal. Rptr. 3d at 684 (quoting Jones & Matson v. Hall, 66 Cal. Rptr. 3d 872 (Cal. Ct. App. 2007)). Courts may grant JNOV motions “only if there is no substantial evidence to support the verdict.” Id. The same standard applies in Michigan. Courts must “view[] the evidence and all legitimate inferences therefrom in the light most favorable to the nonmoving party.” Genna v. Jackson, 781 N.W.2d 124, 128 (Mich. Ct. App. 2009). JNOV motions may be granted “only when there is insufficient evidence

presented to create a triable issue for the jury.” Id. If “reasonable jurors could honestly reach different conclusions regarding the evidence, the jury verdict must stand.” Id.

Under Rule 59, this Court may order a new trial only if the jury reached a “seriously erroneous result” evidenced by: (1) a verdict against the weight of the evidence; (2) excessive damages; or (3) a trial unfair to the moving party as a result of prejudice or bias. Holmes v. City of Massillon, 78 F.3d 1041, 1045-46 (6th Cir. 1996). Here, defendants argue that the verdict went against the weight of the evidence. Thus, the Court “must compare the offered evidence and set aside the verdict only if it is against the clear weight of the evidence as a whole.” In re Brown, 342 F.3d 620, 627 (6th Cir. 2003) (quotations & citations omitted).

“Courts are not free to reweigh the evidence and set aside the jury verdicts merely because the jury could have drawn different inferences or conclusions or because judges feel that other results are more reasonable.” TCP Indus., Inc. v. Uniroyal, Inc., 661 F.2d 542, 546 (6th Cir. 1981) (quotations & citations omitted); J.C. Wyckoff & Assocs., Inc. v. Standard Fire Ins. Co., 936 F.2d 1474, 1487 (6th Cir. 1991) (stating same). The verdict must be affirmed “if it is one which could reasonably have been reached.” TCP Indus., 661 F.2d at 546.

V. Analysis

A. There was Sufficient Evidence for the Jury to Find that Discontinuity Checking and Jacobian Refactorization are Trade Secrets

1. Discontinuity Checking

Altair says that it is entitled to a JNOV or new trial because the jury was not presented with sufficient evidence from which to find that Discontinuity Checking was a

trade secrets. Not so. MSC presented multiple witnesses to explain what Discontinuity Checking is, how it improves and enhances the ADAMS/Solver, and why it qualifies as a trade secret. Douglas Peterson gave the jury an overview of this feature; John Hoban described the feature in more detail; and Dr. Joseph McGrath showed the jury not only where this feature was located in the ADAMS/Solver source code, but also when, where, and how Rampalli and Altair misappropriated it. The Court need not rehash or describe in detail the testimony. It is set forth in MSC's response to Altair's motion. See Doc. 862 at p. 6-8.

Altair, however, contends that: (1) the method that MSC [REDACTED] is publicly known; (2) the method is readily ascertainable; and (3) Rampalli's instructions to Subramanian evincing misappropriation were purportedly disclosed in a publicly available document. None of these arguments carry the day.

Under Michigan law, the term "trade secret" is defined as:

[I]nformation, including a formula, pattern, compilation, program, device, method, technique, or process, that is both of the following:
(i) Derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use.
(ii) Is the subject of efforts that are reasonable under the circumstances to maintain its secrecy.

M.C.L. § 445.1902(d).

Trade secrets often include concepts that are commonly understood mathematical, physical, or engineering concepts that have been used or combined in a unique way:

Plaintiffs need not show that each component of their trade secrets are secret, or even nonobvious over what exists in the public domain. In

holding that “based on a unique combination of both protected and unprotected material, a plaintiff should not be obligated to identify which components of the protected material is secret, the Sixth Circuit relied on a string of cases that stand for the proposition that a trade secret can exist in a combination of characteristics each of which, by itself, is in the public domain.

* * *

A trade secret can exist in a combination of characteristics and components, each of which, by itself, is in the public domain, but the unified process, design and operation of which, in unique combination, affords a competitive advantage and is a protectable secret.

Giasson Aerospace Sci., Inc. v. RCO Eng’g, Inc., 680 F. Supp. 2d 830, 841-42

(E.D. Mich. 2010) (quoting Mike’s Train House, Inc. v. Lionel, L.L.C., 472 F.3d 398, 411 (6th Cir. 2006), and 3M v. Pribyl, 259 F.3d 587, 596-97 (7th Cir. 2001)).

MSC’s witnesses testified that MSC’s use of the [REDACTED] not publicly known or disclosed. Whether MSC’s trade secret, as opposed to the [REDACTED] of the Newton-Raphson iteration, was publicly known was an issue of fact for the jury that the jury resolved in MSC’s favor.

In addition, there was evidence to support MSC’s contention that the use of the direction-preserving method of the Newton-Raphson iteration was not readily ascertainable. Dr. McGrath, “admitted that it is logical and rational to try the direction-preserving method.” While Dr. McGrath did testify that logic might lead to trying one method if another did not work for a particular problem, he explained that the decision to alternate between methods was not a clear cut, “either/or” choice:

[REDACTED]

* * *

[REDACTED]

(Trial Tr. Vol. 11, at 53:8-54:7.) Because there was evidence that the information concerning the when, where, and the degree to which MSC [REDACTED]

[REDACTED] in ADAMS/Solver is not publicly known, the jury's finding that Discontinuity Checking was a trade secret entitled to protection was not unreasonable.

Finally, Altair says that it is entitled to judgment as a matter of law because MSC did not refute Rampalli and Subramanian's testimony that the ADAMS/Solver Primer (Primer) discloses Discontinuity Checking. Not so. Subramanian testified that he did not implement this trade secret into MotionSolve based on information gleaned from the Primer; he did it because Rampalli told him to change the code in an email. A party may not obtain a trade secret illegally and then avoid liability by scouring public sources for fragments of the trade secret and claiming that it is publicly known. See Servo Corp. of Am. v. Gen. Elec. Co., 393 F.2d 551, 555 (4th Cir. 1968) ("We do not believe that in those instances where the extent of disclosure is arguable, and where the information had not been clearly placed in the public domain, General Electric should be allowed to avoid the consequences of the breach of confidence by piecing together in retrospect bits of information which had been disclosed in a variety of places and which as a combination were not clearly a matter of public knowledge.") Subramanian also testified that the Primer is written in English, but that, in addition to a description in English, Rampalli gave him "pseudo-code" for implementing the secret in MotionSolve. (Trial Tr. Vol. 15, at 135:4-16.)

Regardless of what the Primer might state in English, MSC presented evidence from which the jury could reasonably conclude that Rampalli gave Altair the actual implementation of the Discontinuity Checking secret, which is not described in the Primer. For the jury to find that the Primer discloses the trade secret in English, the jury would have to believe Rampalli and Subramanian. The jury did not do so, as was their right. The jury was free to accept or reject any or all of Altair's testimony. By finding in favor of MSC on this trade secret, the jury rejected Altair's testimony regarding the Primer. The fact that the jury rejected Altair's position does not entitle it to a judgment as a matter of law or a new trial.

2. Jacobian Refactorization

The same three MSC witnesses who established that Discontinuity Checking is an MSC trade secret, Peterson, Hoban, and Dr. McGrath, testified that Jacobian Refactorization was an MSC trade secret. Peterson explained that, in order to organize and solve the hundreds of thousands of equations necessary to reach static equilibrium for a given model, ADAMS/Solver uses a Jacobian matrix. Given the number of forces, variables, and equations being solved simultaneously, [REDACTED]

[REDACTED] Over many years of developing and refining its static solver, Peterson explained that MSC found that it could use the Jacobian matrix [REDACTED]. This aspect of the trade secret sped up static simulations without sacrificing performance. The second discovery was that [REDACTED]

[REDACTED] MSC contended that this aspect of the trade secret enhanced the robustness of the solver because it enabled ADAMS/Solver

[REDACTED]

Altair says that: (1) it did not misappropriate the "original version" of the trade secret; (2) the trade secret is readily ascertainable; and (3) MSC's discloses the trade secret in error messages prepared for its customers. These arguments do not carry the day. There was no evidence that MSC changed or present multiple "versions" of this trade secret. To the contrary, MSC witnesses testified that the secret had two parts, and that Rampalli and Altair misappropriated the second part when Rampalli told Subramanian [REDACTED]

[REDACTED] Regardless of whether Altair [REDACTED] the jury was presented with evidence tending to show that Subramanian modified MotionSolve to [REDACTED] exactly like ADAMS/Solver does after Rampalli told him where and when to do it.

Altair also contends that because it is logical to persons who already know it, Jacobian Refactorization is not a trade secret. This argument misses the mark. For this trade secret, it was significant that Rampalli told Altair exactly when and where to [REDACTED] in MotionSolve. It was not until Rampalli arrived at Altair in July 2006 did Altair implement [REDACTED] A reasonable jury could conclude that Jacobian Refactorization is trade secret was not readily ascertainable by those who could obtain economic value from its disclosure or use.

Altair's final argument is that MSC failed to maintain the secrecy of this trade

secret by publishing both aspects of it in error messages made available to ADAMS/Solver customers who sign license agreements that protect the software by prohibiting, among other things, reverse engineering. See DX1145 (an example of an EPRINT file which shows the customer the steps that the ADAMS/Solver took to try to solve a customer model) This argument fails. A licensor does not lose legal protection for its trade secrets by disclosing them to a licensee. See, e.g., Decision Insights, Inc. v. Sentia Grp., Inc., 311 F. App'x 586, 592 (4th Cir. 2009) ("[S]ecrecy need not be absolute; the owner of a trade secret may, without losing protection, disclose to a licensee . . . if the disclosure is made in confidence, express or implied."); see also Niemi v. NHK Spring Co., Ltd., 543 F.3d 294, 299-03 (6th Cir. 2008). Both Hoban and Rampalli testified that only MSC customers licensed to use ADAMS/Solver can generate error messages such as the one appearing in DX1145. Thus, that the error message to a customer contains pertinent information does not mean the information cannot be a trade secret.

B. There was Sufficient Evidence for the Jury to Find that the Trade Secrets have Economic Value

Altair says that MSC did not show that any of its trade secrets have economic value. MSC says that because Altair's stated goal was to match the results of the ADAMS/Solver and that even Altair's own documents reflect the value of the trade secrets demonstrates the trade secrets have value.

MSC has addressed this issue multiple times in post-trial filings. In each filing, MSC has described the impact of the trade secrets upon MotionSolve's ability to match the speed, accuracy, and robustness of the ADAMS/Solver. An explanation appears in

its response to the instant motion. See Doc. 862. An explanation also appears in its response to Altair's motion regarding damages issues. See Doc. 844.

The Court further directed MSC to respond to this issue. First, at a hearing on May 22, 2014, the Court asked for

1. A description of what each of the three trade secrets or features add to the capability of ADAMS/Solver discretely.
2. How does MotionSolve operate without these three features?
3. How was MotionSolve's capability enhanced or improved with the addition of each of the three features?

MSC lodged with the Court a notebook containing 51 exhibits, consisting of testimony and documentary evidence, in which the value of the trade secrets are explained.

Finally, in an August 5, 2014 email in which it asked the parties to address several issues. The first issue was:

1. The parties dispute the importance of the three technical trade secrets to the performance of MotionSolve, and particularly matching the performance of ADAMS/Solver. Please marshal the evidence in the record, testimonial and documentary (full text) supporting your respective positions, and lodge it with the Court.

MSC again lodged with the Court a notebook containing 46 exhibits, mostly duplicative of its May 22, 2014 filing. Attached as Exhibit A is MSC's outline of the evidence responding to the Court's August 5, 2014 email. There is no need to further restate or explain in detail the evidence. Suffice to say that the Court is satisfied that the jury was presented with evidence from which it could reasonably conclude that the trade secrets have value.

- C. There was Sufficient Evidence for the Jury to Find that Rampalli and Altair Knew or had Reason to Know that they had Misappropriated MSC's Trade Secrets

Relying on M.C.L. § 445.1902(b), Altair argues that it is entitled to judgment as a

matter of law because MSC did not submit sufficient evidence to show that Altair acquired any of the trade secrets knowing that they were trade secrets or that Rampalli knew that he was disclosing what MSC considered a trade secret.

Under Michigan law, parties are liable for misappropriating trade secrets based upon what they knew or had reason to know:

"Misappropriation" means either of the following:

(I) Acquisition of a trade secret of another by a person who knows or has reason to know that the trade secret was acquired by improper means.

(ii) Disclosure or use of a trade secret of another without express or implied consent by a person who did 1 or more of the following:

(A) Used improper means to acquire knowledge of the trade secret.

(B) At the time of disclosure or use, knew or had reason to know that his or her knowledge of the trade secret was derived from or through a person who had utilized improper means to acquire it, acquired under circumstances giving rise to a duty to maintain its secrecy or limit its use, or derived from or through a person who owed a duty to the person to maintain its secrecy or limit its use.

(C) Before a material change of his or her position, knew or had reason to know that it was a trade secret and that knowledge of it had been acquired by accident or mistake.

M.C.L. § 445.1902(b).

Here, MSC introduced evidence tending to show that Rampalli knew, or had reason to know, that the ADAMS/Solver code features identified as the three trade secrets were trade secrets when he disclosed them to Altair and suggested their implementation in MotionSolve. Rampalli admitted that he was bound by contract not to disclose MSC's confidential information, including MSC's trade secrets. Rampalli also testified that MSC's code contained trade secrets and that MSC took precautions to protect the confidentiality of the trade secrets within the source code.

The jury was also presented with evidence from which it could reasonably

conclude that Rampalli had significant knowledge of the static solver, to which Discontinuity Checking and Jacobian Refactorization relate. He admitted that, during his 25-plus years working for MSC and its predecessors, he directed at least ten major software releases, including the release of the new static solver in late 1998, early 1999 which contained improvements to the static solver made "in the 1997-98 time period." Rampalli was involved in the development of those improvements to the static solver and wrote code for those improvements to the new static solver.

The evidence also showed that within his first month at Altair, Rampalli made a series of suggestions to improve MotionSolve's static solver using the trade secrets. Regarding Jacobian Refactorization, Dr. McGrath explained that on July 20, 2006, Rampalli revised Altair's [REDACTED] [REDACTED]. Approximately two weeks later, Altair developer Subramanian modified the code per Rampalli's instruction. Regarding Discontinuity Checking, Rampalli sent Subramanian an email on July 29, 2006, with "specific suggestions on how to change the code," instructing Subramanian [REDACTED] [REDACTED] and [REDACTED]. Dr. McGrath explained that, prior to Rampalli's arrival at Altair, MotionSolve had been [REDACTED], but that as soon as he arrived at Altair, Rampalli modified MotionSolve to be consistent with ADAMS/Solver. The jury was also presented with emails from Rampalli in which he took ownership as to the improvements of the static solver. From the evidence, it was not unreasonable for the jury to conclude that Rampalli knew the legal implications of his actions.

As to Altair, there was evidence that it knew or has reason to know that it had acquired information from Rampalli which amounted to trade secrets. Indeed, in January of 2006, Scapa directed his senior managers to pursue Rampalli because he was "THE brain behind ADAMS solver." Eight days later, Dagg interviewed Rampalli, who "said he knows pretty much every aspect of the ADAMS solver (actually both solver implementations; there is an old Fortran one and the new C++ one)." Eventually, Scapa decided to offer Rampalli a job as a "Senior Technical Fellow," putting him to work with "[n]o management to start, just helping with the solver technology, etc."

On March 1, 2006, before Rampalli started working for Altair, MSC sent Altair a letter demanding that it "immediately cease and desist from any efforts to target MSC employees as potential recruits," advising Altair that "MSC information held by former employees constitutes not only confidential information but also trade secrets as set forth in the Uniform Trade Secrets Act, as adopted in Michigan," and warning Altair that "MSC will undertake all action necessary to ensure protection of [its] most valuable asset – [its] intellectual capital, namely [its] employees, and the confidential information they possess." MSC's General Counsel at that time, John Mongelluzzo, then called Altair's General Counsel, Steve Rivken, expressing concern that Altair was recruiting MSC's employees "to get to [MSC's] intellectual property."

After the letter and phone conversation, Altair flew Rampalli out to California in July 2006 to present solver issues to Altair management and developers and subsequently put him to work on MotionSolve with the purpose of getting MotionSolve to generate the same results as the ADAMS/Solver.

Based on the above, the jury could reasonably find that Altair did not take

sufficient steps to ensure that Rampalli would not use MSC trade secrets.

Notwithstanding Rampalli's view that it would take significant time and development before MotionSolve could duplicate ADAMS results using ADAMS models, Altair accomplished the feat in nine months. Indeed, on August 30, 2007, Rampalli sent Scapa and Brancheau this report:

I have some good news to report. Today we managed to get good results from MotionSolve for the third and final model that Toyota gave us for testing. The first two correlated quite well (with baseline Adams results provided by Toyota) without too much difficulty. The third model is difficult by all measures. . . . The MS team has been working on this one model for 2 months. In order to get a solution, they had to implement [REDACTED]

[REDACTED] The match that we get with Adams base line results (provided by Toyota) is astounding.

(PX653.) The next day, Hoffmann congratulated the MotionSolve team for its progress: "Rajiv told me about the progress you have made with the Toyota models. I am amazed that in such a short time you implemented [REDACTED] and got this very complicated model to run. Respect!" (PX624.)

From this evidence, a reasonable jury could reach the conclusion that Altair set out to acquire MSC's trade secrets through Rampalli in order to improve their MotionSolve product. The jury did so conclude. There is no basis to disturb its finding.

D. There was Sufficient Evidence for the Jury to Find that Rampalli and Altair's Actions were Willful and Malicious

Altair also says it is entitled to judgment as a matter of law as to the jury's finding of willful and malicious misappropriation. MSC says that in light of Altair's admitted goal of matching ADAMS results and capitalizing on the narrow window of opportunity to obtain ADAMS business from ADAMS customers while MSC was moving toward its

SimOffice platform, the jury could reasonably find that Rampalli and Altair's actions were willful and malicious.

The jury's verdict reflects that they accepted MSC's theory of the case. That is, that the evidence showed a deliberate and calculated plan to misappropriate MSC's trade secrets without concern for the consequences. This is not an unreasonable conclusion based on the record. Altair is not entitled to have this finding set aside or a new trial.

E. Count I Fails for the Same Reasons Count III Fails

Finally, Altair seeks a judgment in Rampalli's favor, or a new trial on the issue of Rampalli's liability under Count I for breach of his confidentiality obligations. This argument fails for the same reasons that Rampalli is not entitled to a new trial under Count III.

VI. Conclusion

The evidence at trial raised questions of fact for the jury. The jury accepted MSC's version of the facts and the inferences to be drawn from the evidence. They jury rejected Altair's version of the facts and the inferences to be drawn from the evidence. Altair's motion would have the Court simply accept its theory of the case and view of the evidence presented. The Court cannot do so in light of concluding that there is a reasonable basis in the evidence for the jury's verdict. The jury's liability findings on Counts I and III must stand. Altair is not entitled to set aside the verdict or a new trial.

SO ORDERED.

Dated: 10/2/14
Detroit, Michigan


AVERN COHN
UNITED STATES DISTRICT JUDGE

EXHIBIT A

Evidence Showing the Misappropriated Trade Secrets Improve the Speed, Accuracy, and Robustness of ADAMS/Solver

For the evidence regarding the impact of Trade Secrets 1, 2, and 3 on the speed, accuracy, and robustness of ADAMS/Solver, MSC refers the Court to the witness testimony, exhibits, and demonstratives listed below:

- Douglas Peterson (Ex. B, Trial Tr. Vol. 2, at 52:11-59:17, 61:16-72:19, 80:2-84:1, 88:5-89:20, 90:6-91:16; Ex. C, Trial Tr. Vol. 3, at 57:4-61:9);
- John Hoban (Ex. D, Trial Tr. Vol. 8, at 96:11-131:5, 137:22-138:22; Ex. E, Trial Tr. Vol. 9, at 55:11-68:5);
- Joseph McGrath (Ex. F, Trial Tr. Vol. 10, at 73:2-74:12, 105:19-122:23, 133:8-134:5, 136:17-137:19; Ex. G, Trial Tr. Vol. 11, at 49:21-54:7; Ex. H, Trial Tr. Vol. 22, at 74:10-76:7);
- Douglas Neill (Ex. I, Trial Tr. Vol. 12, at 75:6-12);
- Nicolae Orlandea (Ex. D, Trial Tr. Vol. 8, at 60:13-68:10);
- Rajiv Rampalli (Ex. J, Trial Tr. Vol. 6, at 84:12-86:12, 93:14-107:6, 111:1-113:19, 119:1-122:19; Ex. D, Trial Tr. Vol. 8, at 19:1-25:10, 29:4-23);
- Kevin Rubin (Ex. K, Trial Tr. Vol. 13, at 64:14-65:23);
- James Scapa (Ex. L, Trial Tr. Vol. 4, at 135:14-21, 137:9-12);
- James Schmid (Ex. M, Trial Tr. Vol. 20, at 48:8-54:3);
- Ex. N, PX519, at 10 (Altair document describing MSC's motion solution as "[b]roadest, strongest offering in market. Very solid solver with over 150 man years of development.");
- Ex. O, PX561, at 1 (Rampalli criticizing MotionSolve's formulation before he implemented his revisions);

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- **Ex. UU**, PX595 (MotionSolve marketing plan created by Rampalli, identifying improving Altair's solver speeds and robustness as critical to the improvement of the Altair solver);
- **Ex. P**, PX639, at 2 (Rampalli writing in his Altair performance review that he "worked with [Subramanian] to significantly improve [redacted] in MotionSolve [and that] Toyota models are now solving [redacted] as efficiently as ADAMS. Some used to fail.");
- **Ex. Q**, PX640, at 27 (Altair presentation touting "100 man years of MBD experience hired/contracted in the last twelve months" and listing the names of former MSC employees and contractors);
- **Ex. R**, PX650 (Rampalli reminding Ottarsson [redacted]);
- **Ex. S**, PX660 (Rampalli instructing Liu and Subramanian [redacted]);
- **Ex. T**, PX801, at 1 (Rampalli criticizing MotionSolve's formulation before he implemented his revisions);
- **Ex. U**, PX803, at 6, 13-14 (Altair presentation verifying that the benefits of a DAE integrator are "accuracy, speed and robustness"); and
- **Ex. V**, PX843, at 4-6, 8, and 29 (Schmid's notes from an interview with Rampalli stating that: [redacted])

MotionSolve Matching ADAMS/Solver Results

For the evidence regarding the impact of Trade Secrets 1, 2, and 3 on MotionSolve's ability to match ADAMS/Solver results or performance, MSC refers the Court to the witness testimony, exhibits, and demonstratives listed below:

- Douglas Peterson (Ex. B, Trial Tr. Vol. 2, at 118:6-121:11);
- John Hoban (Ex. D, Trial Tr. Vol. 8, at 110:25-115:24, 138:23-139:14; Ex. E, Trial Tr. Vol. 9, 58:22-59:5);
- Joseph McGrath (Ex. F, Trial Tr. Vol. 10, at 133:4-11, 136:17-137:22; Ex. G, Trial Tr. Vol. 11, at 68:11-73:17, 78:20-81:10; Ex. H, Trial Tr. Vol. 22, at 75:17-76:7)
- Douglas Neill (Ex. I, Trial Tr. Vol. 12, at 46:19-52:4, 75:6-80:3);
- Nicolae Orlandea (Ex. D, Trial Tr. Vol. 8, at 64:14-68:10);
- Jon Quigley (Ex. L, Trial Tr. Vol. 4, at 45:3-47:9, 49:5-51:9);
- Rajiv Rampalli (Ex. J, Trial Tr. Vol. 6, at 82:6-84:11; Ex. W, Trial Tr. Vol. 21, at 72:12-24);
- Kevin Rubin (Ex. K, Trial Tr. Vol. 13, at 68:2-76:13);
- James Scapa (Ex. X, Trial Tr. Vol. 5, at 16:14-18:14);
- Subramanian (Ex. Y, Trial Tr. Vol. 16, at 76:6-13);
- Rajesh Jha (Ex. Z, Trial Testimony, at 196:19-198:14);
- Ex. AA, PX525 (Scapa instructing Dagg and Brancheau to interview Rampalli, "THE brain behind ADAMS solver");

- **Ex. BB**, PX559 (Rajiv's task list showing [REDACTED] to be incorporated into MotionSolve's 9.0 release);
- **Ex. CC**, PX566 (Pertosa requesting Rampalli's input on draft of an email to Scapa and Brancheau regarding differences between ADAMS/Solver and MotionSolve which will preclude Altair from matching ADAMS results absent changes to MotionSolve);
- **Ex. DD**, PX567 (Pertosa's email to Scapa and Brancheau incorporating Rampalli's revisions to Pertosa's initial draft);
- **Ex. EE**, PX593, at 2 (Hoffmann estimates development effort to take 50 man years at least);
- **Ex. FF**, PX624 (Hoffmann's email to Liu, Subramanian, and Pertosa congratulating them on their ability to make a "very complicated [Toyota] model to run" in such a short period of time);
- **Ex. GG**, PX652 (Rampalli explaining [REDACTED] to Subramanian, which relates to trade secret 2, Discontinuity Checking);
- **Ex. HH**, PX653 (Rampalli's email to Scapa and Brancheau describing the "match that we get with Adams base line results" as "astounding");
- **Ex. S**, PX660 (Rampalli instructing Subramanian & Liu to [REDACTED]);
- **Ex. II**, PX661 (TWiki page showing Subramanian [REDACTED]);
- **Ex. JJ**, PX810 (Rampalli's revisions to Pertosa's draft email introduced as PX566);
- **Ex. KK**, PX850B [REDACTED];

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- **Ex. LL, PX850D** [REDACTED]
- **Ex. MM, PX850E** (MotionSolve change history showing Subramanian performing [REDACTED] in reference to the revision shown in PX850F);
- **Ex. NN, PX850F** (Discontinuity Checking revision in MotionSolve code);
- **Ex. OO, PX850H** (MotionSolve change history showing Rampalli working on “suggestions from Rajiv”);
- **Ex. PP, PX850I** (Jacobian Refactorization being implemented in MotionSolve code);
- **Ex. QQ, PX850J** (MotionSolve code invoking Jacobian Refactorization);
- **Ex. RR, PX850U** (Discontinuity Checking revision in MotionSolve code);
- **Ex. SS, PX862, at 16-18** (Modine Presentation: “MotionSolve results match very well with ADAMS results”); and
- **Ex. TT, PX863, at 12** (Navistar Presentation: “Are the MotionSolve results correct? What do you mean ‘correct’? I think that I mean ‘the same’”).